

MARKED-UP COPY OF AMENDMENTS

IN RE APPLICATION OF: :
ATSUSHI SHIOTA ET AL. : GROUP ART UNIT: 1712
SERIAL NO: 09/770,289 :
FILED: JANUARY 29, 2001 : EXAMINER: FEELY, M.
FOR: PROCESS FOR PRODUCING
SILICA-BASED FILM, SILICA-
BASED FILM, INSULATING FILM,
AND SEMICONDUCTOR DEVICE

AMENDMENT

ASSISTANT COMMISSIONER FOR PATENTS
WASHINGTON, D.C. 20231

SIR:

In response to the Office Action dated February 28, 2002, please amend the application identified above as follows (marked-up copy of amendments attached):

IN THE CLAIMS

Please amend Claims 1, 3 and 6 as follows:

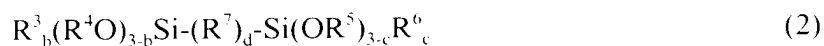
1. (Amended) A process for producing a silica-based film [which comprises], the process ~~comprising~~ irradiating a film comprising at least one siloxane compound with electron beams at an irradiation dose of from 1 to 500 $\mu\text{C}/\text{cm}^2$ to thereby convert the film into a film having a dielectric constant of 3 or lower and having silicon carbide bonds represented by Si-C-Si.

3. (Amended) The process as claimed in claim 1, wherein the siloxane compound is a product of the hydrolysis and/or condensation of at least one compound selected from the group consisting of compounds represented by the following formula (1):



wherein R^1 represents a monovalent organic group or a hydrogen atom; R^2 represents a monovalent organic group; and a is an integer of 0 to 2,

and compounds represented by the following formula (2):



wherein R^3 , R^4 , R^5 , and R^6 may be the same or different and each represents a monovalent organic group; b and c may be the same or different and each is an integer of 0 to 2; R^7 represents an oxygen atom or a group represented by $-(CH_2)_n-$, wherein n is 1 to 6; and d is 0 or 1.

6. (Amended) The process as claimed in claim 1, wherein the electron beam irradiation is conducted at an energy of from 0.1 to 50 keV [in an irradiation dose of from 1 to 1,000 $\mu C/cm^2$].

Please add new Claims 16 as follows:

--16. (New) The process as claimed in claim 1, wherein the irradiation dose is from 1 to 200 $\mu C/cm^2$.--